

REMARKS

By this Amendment, the specification, claims 1-3, 5, 9, 12, 16, 21, 23-25, 27-28 and 31 are amended, and claims 33 and 34 are newly added. Claims 1-3, 5, 9, 12, 16, 21, 23-25, 27-28 and 31 are amended to merely clarify the claimed subject matter without the intention of narrowing the scope of any of the claims. New claims 33 and 34 recite features that were originally included in claims 3 and 25, respectively. No new matter is added. After entry of this Amendment, claims 1-34 will remain pending in the patent application.

In response to the Restriction Requirement / Election of Species, Applicants hereby provisionally elect the invention of Group I and species B(ii), claims 23-32. This election is made with traverse.

With respect to the Restriction Requirement, Applicants respectfully submit that the arguments set forth in the Office Action are not persuasive for at least the following reasons.

First, in order to support a Restriction Requirement the Examiner argues that the apparatus as claimed can be used to practice another and materially different process. Specifically, the Examiner contends that “the apparatus as claimed can be used to practice another and materially different process such as a process of forming a typical image or pattern on a substrate.” However, Applicants respectfully submit that “the process of forming a typical image or pattern on a substrate” does not qualify, in any way, as another and materially different process.

Claim 1 recites a method of enhancing the image resolution in a lithographic system, comprising decomposing a reticle pattern into at least two constituent sub-patterns; coating a substrate with a pre-specified photoresist layer, the pre-specified photoresist layer having reduced memory reaction characteristics; exposing a first of the at least two constituent sub-patterns by directing a projection beam through the first sub-pattern such that the lithographic system produces a first sub-pattern image onto the pre-specified photoresist layer of the substrate; processing the exposed substrate; exposing a second of the at least two constituent sub-patterns by directing the projection beam through the second sub-pattern such that the lithographic system produces a second sub-pattern image onto said pre-specified photoresist layer of said substrate, wherein the exposing of the first of the at least two constituent sub-patterns and the exposing of the second of the at least two constituent sub-patterns combine the first and second sub-pattern images to produce a desired pattern on said substrate. Clearly, the method of claim 1 is also directed to forming an image of a pattern on a substrate. Therefore, the Examiner’s allegation that “a process of forming a typical image or pattern on a substrate” is materially different from the method as recited in claim 1 is

manifestly incorrect. Accordingly, it is respectfully submitted that the Examiner has not established a *prima facie* case under MPEP 806.05(e) that supports a Restriction Requirement between the invention of Group I and the invention of Group II.

Second, Applicants respectfully submit that the search and examination required for any of Group I or Group II necessarily includes the search and examination required of the remaining Group because the method of Group I and the apparatus of Group II both involve a double exposure. For example, claim 11 recites an enhanced image resolution lithographic system, comprising: a coating station configured to apply a photoresist layer onto a substrate, the photoresist layer configured to exhibit reduced memory reaction characteristics; an exposure apparatus to expose a reticle pattern onto the substrate; and a processing station configured to process a substrate exposed by the exposure apparatus, wherein the reticle pattern is decomposed into at least two constituent sub-patterns that can be optically resolved by the exposure apparatus, wherein a first of the at least two constituent sub-patterns is exposed onto the substrate by the exposure apparatus to produce a first sub-pattern image onto the photoresist layer of the substrate and the exposed substrate is processed by the processing station, and wherein a second of the at least two constituent sub-patterns is exposed onto the substrate by the exposure apparatus to produce a second sub-pattern image onto the photoresist layer of the substrate and the first and second sub-pattern images are combined to reproduce the reticle pattern. A comparison of the language used in independent claims 1 and 11 clearly indicates that any search designed to identify documents relevant to the patentability of Group I will employ the same or similar search terms and techniques as Group II and, therefore, yields the same or similar documents as a search designed to identify documents related to Group II. As a result, the criteria for a proper restriction requirement set forth in MPEP §803 have not been satisfied. MPEP §803 states “if the search and examination of an entire application can be made without serious burden, the examiner **must** examine it on the merits, even though it includes claims to independent or distinct inventions.” (Emphasis added).

Finally, it should be noted that Group I involves substantially the same dependent claims as Group II, further minimizing the burden involved in co-examination. Accordingly, Applicants respectfully submit that the Restriction Requirement is unnecessary and improper.

With respect to the election of species requirement, Applicants respectfully submit that the subject matter of each species is sufficiently related that a thorough search and examination of any one species would necessarily encompass the search and examination of the remaining species. Because both of the species relate to a device manufacturing method

using a double exposure process, the search and examination for species (i) would necessarily include the search and examination for species (ii), and vice versa. As a result, it is respectfully submitted that the search and examination can be made without serious burden.

Furthermore, Applicants respectfully submit that the MPEP's guidance in section 806.04 involving species issues also necessitates the withdrawal of the rejection. The Patent Office's own rules require that "a reasonable number of species may still be claimed in one application...". (See MPEP §806.04(a)). Because only two species have been identified in this Office Action, the Examiner appears to have ignored the PTO's own rules and policies by restricting Applicants to one single species.

For at least these reasons, reconsideration and withdrawal of the Election of Species Requirement and Restriction Requirement are respectfully requested.

Respectfully submitted,

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